Research Web exclusive

# Academic family health teams

## Part 2: patient perceptions of access

June C. Carroll MD CCFP FCFP Yves Talbot MD FRCP(C) Joanne Permaul MA CCRP Anastasia Tobin MHSc Rahim Moineddin MSc PhD Sean Blaine MD CCFP Jeff Bloom MD CCFP FCFP Debra Butt MD MSc CCFP FCFP Kelly Kay MA Deanna Telner MD MEd CCFP FCFP

#### **Abstract**

Objective To explore patients' perceptions of primary care (PC) in the early development of academic family health teams (aFHTs)—interprofessional PC teams delivering care where family medicine and other health professional learners are trained—focusing on patients' perceptions of access and patients' satisfaction with services.

**Design** Self-administered survey.

Setting Six aFHTs in Ontario.

**Participants** Adult patients attending appointments and administrators at each of the aFHTs.

Main outcome measures Answers to questions about access from the Primary Care Assessment Tool Adult Expanded Version, the Primary Care Assessment Survey, and research team questions.

**Results** The response rate was 47.3% (1026 of 2167). The mean (SD) Primary Care Assessment Tool first-contact accessibility score was 2.28 (0.36) out of 4, with 96.5% of patients rating access less than 3, which was the minimum expected level of care. Two-thirds (66.6%) indicated someone from their aFHTs would definitely or probably see them the same day if they were sick, 56.8% could definitely or probably get advice quickly by telephone, and 14.5% indicated it was definitely or probably difficult to be seen by their primary health care provider (HCP). Additionally, 46.9% indicated they would like to get medical advice by e-mail. For a routine or follow-up visit, 73.4% would be

#### **EDITOR'S KEY POINTS**

- Accessibility is a key component of primary care (PC) associated with equity in health; increased quality of care, population health, and patient satisfaction; decreased costs; and lower hospitalization rates. This study explored patients' perceptions of access to PC in newly formed academic family health teams (aFHTs).
- No patient or practice characteristics predicted improved access in the aFHTs in this study, but in general satisfaction with access and overall care was high. There is, however, room for improvement.
- The findings of this study are intended to serve as baseline descriptors against which interventions to improve access can be measured. A future study will determine what changes were implemented in these aFHTs and if patient ratings have improved.

This article has been peer reviewed. Can Fam Physician 2016;62:e31-9

willing to see another aFHT physician if their regular provider were unavailable, while only 48.3% would see a nonphysician HCP. If sick, 88.2% would see another aFHT physician and 55.2% would see a nonphysician HCP. Most (75.3%) were satisfied with access to their regular HCP.

Conclusion Although patients are generally satisfied with care, there is room for improvement in access. Strategies are needed to enhance access to care, including addressing appropriate roles and scopes of practice for nonphysician HCPs. The accessibility challenges for aFHTs will likely affect new family physicians and other HCPs training in these practices and their approach to future practice.

Recherche Exclusivement sur le web

## Les équipes universitaires de santé familiale

## Deuxième partie : ce que pensent les patients de l'accessibilité

June C. Carroll MD CCFP FCFP Yves Talbot MD FRCP(C) Joanne Permaul MA CCRP Anastasia Tobin MHSc Rahim Moineddin MSc PhD Sean Blaine MD CCFP Jeff Bloom MD CCFP FCFP Debra Butt MD MSc CCFP FCFP Kelly Kay MA Deanna Telner MD MEd CCFP FCFP

#### Résumé

Objectif Vérifier ce que les patients pensent des soins de première ligne (SPL) au moment où s'installent des équipes universitaires de santé familiale (EUSF) - des équipes interprofessionnelles dispensant des soins de première ligne dans lesquelles des professionnels de la médecine familiale et d'autres professionnels de la santé sont formés - et ce, en ciblant les quatre domaines principaux des SPL.

Type d'étude Une enquête auto-administrée.

Contexte Six EUSF de l'Ontario.

Participants Des patients adultes venant à leur rendez-vous et des administrateurs de chacune des EUSF.

Principaux paramètres à l'étude Les réponses aux questions du Primary Care Assessment Tool Adult Expanded Version portant sur l'accessibilité, à celles du Primary Care Assessment Survey et à celles adressées aux équipes de recherche.

Résultats Le taux de réponse était de 47,3% (1026 sur 2167). Le score moyen (DS) obtenu au Primary Care Assessment Tool pour l'accès au premier contact était de 2,28 (0,36) sur 4, avec 96,5% des patients codant l'accessibilité à moins de 3, ce chiffre étant le niveau minimum attendu pour les soins. Les deux-tiers (66,6%) indiquaient qu'ils seraient certainement ou probablement vus le même jour par quelqu'un de leur EUSF s'ils étaient malades, 56,8% estimaient qu'ils pourraient certainement ou probablement recevoir rapidement un conseil au téléphone et 14,5% disaient qu'il était certainement ou probablement difficile de voir leur soignant habituel. De plus, 46,9% ont mentionné qu'ils souhaiteraient recevoir des conseils d'ordre médical par courriel. Lors d'une visite de routine ou de suivi, 73,4% des patients accepteraient de voir un autre médecin de l'EUSF si leur médecin habituel n'était pas disponible, alors que seulement 48,3% accepteraient un soignant non médecin. En cas de maladie, 88,2% accepteraient de voir un autre médecin de l'EUSF tandis que 55,2% accepteraient un soignant non médecin. La plupart (75,3%) étaient satisfaits de l'accès à leur soignant habituel.

**Conclusion** Même si les patients étaient généralement satisfaits des soins reçus, il est encore possible d'améliorer l'accès. Il faudra des stratégies pour améliorer l'accès aux soins, par exemple en précisant les rôles et les domaines de pratique des soignants non médecins. Il est probable que les problèmes d'accessibilité que les EUSF devront affronter auront un effet sur les nouveaux médecins de famille et sur les autres professionnels de la santé que ces cliniques forment, mais aussi sur la pratique future de ces soignants.

#### POINTS DE REPÈRE DU RÉDACTEUR

- L'accessibilité est une composante clé des soins de première ligne (SPL), qui s'accompagne d'une équité en santé; d'une amélioration des soins, de la santé de la population et de la satisfaction des patients; d'une réduction des coûts; et d'un moindre taux d'hospitalisation. Cette étude voulait savoir ce que pensent les patients de l'accès aux SPL dans les équipes universitaires de santé familiale (EUSF) récemment formées.
- Dans cette étude, aucune des caractéristiques des patients ou des cliniques n'était associée à un meilleur accès aux EUSF; en général, toutefois, on observait un haut niveau de satisfaction pour l'accès et pour l'ensemble des soins. On notait cependant qu'il y a place à amélioration.
- Les résultats de cette étude doivent permettre d'établir une description de base contre laquelle toute intervention pour améliorer l'accès pourra être évaluée. Une étude à venir permettra de savoir quels changements ont été apportés dans ces EUSF et si cela a amélioré les cotes attribuées par les patients.

Cet article a fait l'objet d'une révision par des pairs. Can Fam Physician 2016;62:e31-9

ccessibility, a key component of primary care (PC), is associated with equity in health; increased quality of care, population health, and patient satisfaction; decreased costs; and lower hospitalization rates for ambulatory-care-sensitive conditions. 1-3 The components of access have been defined as first-contact accessibility, and accessibility and accommodation:

First-contact accessibility [is] the ease with which a person can obtain needed care (including advice and support) from the practitioner of choice within a time frame appropriate to the urgency of the problem [and] accessibility-accommodation [is] the way primary health care resources are organized to accommodate a wide range of patients' abilities to contact health care clinicians and reach health care services. (The organization of characteristics such as telephone services, flexible appointment systems, hours of operation, and walk-in periods).4

Since 2002, PC reform has been a high priority in Canada, with access to services being an important component.<sup>5,6</sup> In Ontario, interprofessional family health teams (FHTs) include family physicians, nurses, nurse practitioners, social workers, dietitians, and other health providers working collaboratively. Additionally, this model involves rostered patient lists, requirements for after-hours care, an after-hours telephone advice service, and electronic medical records.

Several Canadian studies have reported mixed results when examining patient-reported access to care and satisfaction with access within these new PC models.<sup>5,7-9</sup> In Haggerty and colleagues' survey of primary health care clinics in Quebec, conducted in the early stages of primary health care reform, first-contact accessibility was problematic but better in clinics with 10 or fewer physicians; a nurse; telephone access 24 hours a day, 7 days a week; and evening walk-in services.5 Tourigny and colleagues found no difference in patients' perceptions of organizational (convenient location and hours, waiting times for appointments, ease of contact by telephone) and first-contact accessibility and service responsiveness following family medicine group implementation in Quebec.7 Family medicine groups consist of groups of family physicians and nurses offering a range of services to registered patients including after-hours coverage.7 Howard and colleagues' study showed generally high satisfaction with access in 2 interprofessional academic family medicine clinics, but the authors commented that "some aspects of access could be improved by changes in practice organization or patient education regarding expectations."8 A study of organizational models of PC in Ontario showed that established capitation-model practices had the highest patient-reported access.9

The objective of this study was to explore patients' perceptions of and satisfaction with access to PC in the early stages of development of academic family health teams (aFHTs), where family medicine residents, medical students, and other health professional learners are trained. The perceived accessibility of care might influence the attitudes of future health care providers (HCPs) toward new PC models.

#### **METHODS**

### Questionnaire development

The FHT Patient Perceptions of Care questionnaire combined questions from 3 sources: the Primary Care Assessment Tool Adult Expanded Version (PCAT), 10 the Primary Care Assessment Survey (PCAS),11 and questions developed by the research team. This paper reports on responses to the access questions from these 3 sources. The PCAT and PCAS have been shown to consider the attribute of accessibility but from different patient perspectives. 12 The PCAT uses a 4-point Likert scale to capture patients' responses about the likelihood of the occurrence of an aspect of their care—in this case items such as whether you can access a clinic appointment when sick or whether you can access someone by telephone for advice (definitely=4, probably=3, probably not=2, definitely not=1). A mean score of 3 was chosen as the minimum expected care level for access, as this has been used in previous studies.5,7 The PCAS questions are related more to patient satisfaction with aspects of access such as rating the wait for an appointment (6-point Likert scale from excellent to very poor) or how often you see your regular HCP (always to never). A separate questionnaire was completed by the administrators at the 6 participating aFHTs, including questions about aFHT size, health professionals, use of electronic medical records, time since becoming an aFHT, and degree to which their FHT plans had been implemented at the time of the survey.

#### Design

Questionnaires were self-administered by patients attending appointments at 6 aFHTs affiliated with the University of Toronto in Ontario, in urban and suburban locations. Patients 18 years of age and older who could communicate in English were invited by clinic secretaries to complete the questionnaire. Further details on survey administration, sample size calculations, instrument development, and scoring can be found in the companion to this article (page e23).13

#### **Analysis**

Descriptive statistics were used to explore sample characteristics. Multivariate logistic regression models were

used to estimate adjusted relative risks (RRs) of given outcomes (PCAT, PCAS, or research team questions) as a function of patient- and clinic-level characteristics that have been hypothesized to affect access. Patient and practice characteristics are described in more detail in the companion article (page e23).13 Variability of outcomes both within and between clinics was investigated. Regression parameters were estimated using ordinary least squares methods if clinic variation was negligible. Patient and practice characteristics were considered to be significant predictors of access at  $P \le .05$ .

Ethics approval was received from the hospital research ethics boards associated with participating aFHTs.

#### **RESULTS**

The response rate was 47.3% (1026 questionnaires completed of 2167 questionnaires distributed) ranging from 34.9% to 62.6% across the 6 sites, with 117 to 234 patients per site. Participants had a mean age of 49.6 years and were primarily female, English speaking, married, employed, and educated (Table 1). These aFHTs had been funded for less than 2 years, and FHT business plan implementation scores ranged from 5 to 9 out of 10 (1=no implementation, 10=full implementation). Characteristics of the participating aFHTs are listed in Table 2.

Utilization of these aFHTs was high with by far most responding patients reporting that they would definitely or probably go to their aFHT for general checkups and for urgent problems (Table 3). The mean (SD) PCAT score for first-contact accessibility was 2.28 (0.36) out of 4, with 97% of responding patients rating access less than 3, which is lower than our minimum expected care level. Two-thirds indicated that someone from their aFHT would definitely or probably see them the same day if they were sick, only a small number of patients indicated it was definitely or probably difficult to get medical care from their primary HCP, and more than half could definitely or probably get advice quickly by telephone (Table 4). If they were sick and called their aFHTs for appointments, 545 (59.6%) patients reported they would be seen the same or the next day, 261 (28.5%) indicated they would be seen in between 2 and 5 days, and 109 (11.9%) indicated more than 5 days.

Patients' ratings on the PCAS questions regarding access to PC services at their aFHTs were quite high (Table 5). Additionally, patients were asked if they would like to get medical advice by e-mail; 449 (46.9%) indicated yes, 265 (27.7%) indicated no, and 244 (25.5%) were not sure.

With regard to access to their regular HCP for routine or urgent visits, continuity of providers was rated fairly well, with by far most seeing their regular HCP when

Table 1. Characteristics of family health team patient participants: N = 1026; mean (range) age of patients was 49.6 (18-90) years.

wus 49.6 (16-90) yeurs.	
CHARACTERISTIC	n/N (%)*
Age group, y	
• ≤39	292/953 (30.6)
• 40-64	471/953 (49.4)
• ≥ 65	190/953 (19.9)
Female	686/958 (71.6)
English spoken at home	860/917 (93.8)
Recent immigrant (in Canada ≤ 10 y)	46/918 (5.0)
Marital status	
• Single	215/941 (22.8)
Married or common law	566/941 (60.1)
<ul> <li>Separated, divorced, or widowed</li> </ul>	160/941 (17.0)
Employment	
• Employed	540/916 (59.0)
<ul> <li>Not employed (not employed, student, or retired)</li> </ul>	376/916 (41.0)
Education	
High school or less	196/956 (20.5)
<ul> <li>More than high school</li> </ul>	760/956 (79.5)
Household income	
• ≤\$35000	189/908 (20.8)
• \$36000-\$75000	251/908 (27.6)
• > \$75000	377/908 (41.5)
<ul> <li>Not sure or declined to answer</li> </ul>	91/908 (10.0)
Perception of health as excellent, very good, or good	794/936 (84.8)
*Proportions might not add to 100% owing to r	ounding.

going for a routine or follow-up visit, decreasing to less than two-thirds (61.0%) for urgent (sick) visits (Table 6).

For a routine or follow-up visit, most patients would see another aFHT physician if their regular provider were not available; but fewer than half would see a nonphysician HCP, and a third said maybe they would see a nonphysician HCP (Table 7). In the case of an urgent or sick visit, by far most would see another aFHT physician, about half would see a nonphysician HCP, and a quarter might see the nonphysician in this circumstance. Most (75.3%) were very satisfied or satisfied with access to their regular HCP, and 88.3% were very satisfied or satisfied with overall care at their aFHTs.

Table 8 reports on patient and practice predictors of various aspects of access. There were no significant predictors of the PCAT accessibility domain. Predictors of satisfaction with the wait to get an appointment when sick included the practice having a nurse practitioner (P=.04) and 10 or more physicians (P=.02), and being 65 years of age or older (P=.03) and being in good health (P=.004). A significant predictor of willingness to see a nonphysician for a routine or urgent visit was the

Table 2. Characteristics of participating academic FHTs

SITE	LENGTH OF OPERATION,* MO	NO. OF FHT SITES	DEGREE OF IMPLEMENTATION OF FHT PLAN (SCALE 1-10) <sup>†</sup>	NO. OF ROSTERED PATIENTS	NO. OF FAMILY DOCTORS*	NO. OF FAMILY MEDICINE RESIDENTS*	NO. OF OTHER HEALTH CARE PROFESSIONALS <sup>‡</sup>	EMR
1	15	1	8	12 000	11	20	14	Yes
2	18	1	5	8000	14	26	8	Yes
3	19	2	9	6000	4	15	6	Yes
4	16	>1	5	About 50 000	NA§	NA§	NA	Yes
5	NA§	2	7	About 3300	17	20	10	No
6	14	1	7	9600	20	20	6	No

EMR-electronic medical record, FHT-family health team, NA-not available.

**Table 3.** Patient-reported use of academic family health teams: An FMC was equivalent to a family health team in this study.

PCAT QUESTION	DEFINITELY OR PROBABLY, n/N (%)		
When you need a general checkup or complete physical, do you go to this FMC before going somewhere else?	996/1016 (98.0)		
When you have an urgent health problem, do you go to this FMC before going somewhere else?	866/1014 (85.4)		
When you need a referral to a specialist, do you go to this FMC before going somewhere else?	996/1015 (98.1)		
FMC—family medicine centre, PCAT—Primary Care Assessment Tool Adult Expanded Version.			

presence of a nurse practitioner in the aFHT (P = .003). Although not significant, there was a trend for recent immigrants to be less likely to be willing to see a nonphysician HCP for a routine visit (RR=0.70; 95% CI 0.46 to 1.09; P=.12) and for an urgent or sick visit (RR=0.77; 95% CI 0.54 to 1.10; P=.15). Predictors of wanting e-mail medical advice were younger age (P<.001), higher income (P < .001), and higher education (P = .004).

#### DISCUSSION

This paper reports on access to PC at early stages of establishment of aFHTs. As reported in other studies,5,7 access to care was problematic, with only about twothirds of respondents reporting they could be seen the same day if sick or could get necessary telephone advice quickly. About half the respondents would have to take time off to visit the office for care. Slightly less than half were not aware of the telephone nursing advice line available when the office was closed. It is interesting that

Table 4. Patient-reported access to the academic family health team: An FMC was equivalent to a family health team in this study.

PCAT QUESTION	DEFINITELY OR PROBABLY, n/N (%)			
When your FMC is open and you get sick, would someone from there see you the same day?	673/1010 (66.6)			
When your FMC is open, can you get advice quickly over the telephone if you need it?	573/1008 (56.8)			
When your FMC is closed, is there a telephone number you can call when you get sick?	588/1009 (58.3)			
When your FMC is closed on Saturday and Sunday and you get sick, would someone from there see you the same day?	113/998 (11.3)			
When your FMC is closed and you get sick during the night, would someone from there see you that night?	74/1003 (7.4)			
Is it easy to get an appointment for a general checkup at your FMC?	838/1010 (83.0)			
Once you get to your FMC, do you have to wait more than 30 minutes before you are checked by the doctor or nurse?	284/1008 (28.2)			
Do you have to wait a long time or talk to too many people to make an appointment at your FMC?	152/1014 (15.0)			
Is it difficult for you to get medical care from your FMC when you think it is needed?	146/1007 (14.5)			
When you have to go to your FMC, do you have to take time off from work or school to go?	528/992 (53.2)			
FMC—family medicine centre, PCAT—Primary Care Assessment Tool				

Adult Expanded Version.

<sup>\*</sup>Length of operation was calculated as the time between the date funding was received and the end date of the study.

 $<sup>^{\</sup>dagger}$ Scale ranged from 1 = none to 10 = full implementation.

<sup>\*</sup>Doctors, residents, and health care professionals includes full-time and part-time practitioners.

<sup>§</sup>Information was not provided by FHT managers.

no patient or practice characteristics predicted improved access, although patients who were older, who were married or who had ever been married, who were in good self-reported health, and in larger practices or practices with nurse practitioners reported the highest satisfaction with the wait for appointments when sick.

Differences have been found among countries regarding access to PC services. Of 10 countries surveyed, PC physicians in Canada were the least likely to report that almost all (more than 80%) patients could get a same- or next-day appointment when they were requested (22%).14 The 2008 Canadian Survey of Experiences with Primary Health Care reported that of the 54% of adults who required routine or ongoing care in the past 12 months,

Table 5. Patient rating of access to primary care services at the academic family health team: An FMC was equivalent to a family health team in this study.

,				
PCAS QUESTION	EXCELLENT, VERY GOOD, OR GOOD, n/N (%)			
How would you rate the usual wait for an appointment when you are sick and call the FMC asking to be seen?	680/953 (71.4)			
When you have an appointment, how would you rate the amount of time you wait at your FMC for your appointment to start?	733/995 (73.7)			
Thinking about the times you have needed to consult a health care provider, how would you rate the following:				
<ul> <li>Ability to get through to the FMC by telephone?</li> </ul>	701/966 (72.6)			
<ul> <li>Ability to get medical advice by telephone when you have a question?</li> </ul>	511/867 (58.9)			
FMC—family medicine centre, PCAS—Primary Care Assessment Survey.				

**Table 6.** Patient responses to questions about access to their regular health care provider: An FMC was equivalent to a family health team in this study

equivalent to a family fleatiff team in this study.				
PCAS QUESTION	n/N (%)			
When you go for a routine or follow-up visit to your FMC, how often do you see your regular health care provider?  • Always, almost always, or a lot of the time	795/966 (82.3)			
How satisfied are you with this? • Excellent, very good, or good	821/969 (84.7)			
When you are sick (urgent visit) and go to the FMC, how often do you see your regular health care provider?  • Always, almost always, a lot of the time	554/908 (61.0)			
How satisfied are you with this? • Excellent, very good, or good	663/908 (73.0)			
FMC—family medicine centre, PCAS—Primary Care Assessment Survey.				

13% experienced difficulties accessing it. Of the 27% of adults who required immediate care for a minor health problem in the past 12 months, 21% experienced difficulties being seen. 15 The 2007 to 2008 GP Access Survey in England found that younger people, people of Asian decent, and those working full time or with long commuting times to work reported the lowest levels of satisfaction and experience with access.16 In contrast to our study, they found that access was better in small practices (fewer than 2000 patients). Haggerty et al also found access to be better in clinics with 10 or fewer physicians.5 In a recent study of care in a family medicine teaching clinic, while most patients were satisfied with care, 40% of patients wanted evening clinic hours, and those patients who were less satisfied with care were also less satisfied with wait times.<sup>17</sup> In the academic setting, additional physicians or residents might fill the gaps left by those doing academic work. More work is needed in this area, especially considering the tendency for practices to combine into larger FHTs.

Interesting findings emerged regarding willingness to see other physicians or nonphysician HCPs. Patients were more likely to be willing to see another physician from the aFHT for a routine or urgent visit than to see a qualified nonphysician HCP. A quarter of patients said they might be willing to see such a professional. Having a nurse practitioner in the aFHT was predictive of willingness to see a nonphysician HCP for routine or urgent visits. It might be that at this early stage of aFHTs, patients were not aware of the scope of practice of nonphysician HCPs. Tourigny et al showed that 18 months following the introduction of family medicine groups in Quebec, patients' willingness to consult nurses increased significantly (P<.001).7 This suggests that willingness to see other HCPs might increase with time and understanding of their roles and scope of practice.

The interest in receiving medical advice by e-mail has not been assessed in many studies on access. Almost half of our respondents expressed interest in getting e-mail advice. Not surprisingly, this interest was higher in younger patients, and those with more education and higher socioeconomic status. A recent US survey reported that patients were interested in receiving appointment reminders and answers to medical questions by e-mail and in scheduling appointments online.18 A study of patients older than 65 years of age in community-based practices in California showed that although only 1.3% had used e-mail to communicate with their physicians, 49% were interested in doing so.19 Another study of US family medicine patients showed 68% used e-mail and of those, 80% were interested in using it to communicate with their clinic.20 A systematic review of studies examining e-mails for patient-provider communication showed that patients and providers recognized the benefits of e-mail for enhancing communication but were concerned about confidentiality and security.21

**Table 7.** Patients' reported willingness to see another health care provider: An FMC was equivalent to a family health team in this study.

RESEARCH TEAM QUESTION	YES, N (%)	NO, N (%)	MAYBE, N (%)
When you go for a routine or follow-up visit to your FMC and your regular health care provider is not available, would you be willing to see			
<ul> <li>another physician from this centre?</li> <li>a health professional who is not a physician (eg, nurse, pharmacist, dietitian, social worker) who is qualified to help you?</li> </ul>	714 (73.4) 455 (48.3)	96 (9.9) 204 (21.6)	163 (16.8) 284 (30.1)
When you go for an urgent visit or a visit because you are sick to your FMC and your regular health care provider is not available, would you be willing to see			
<ul> <li>another physician from this centre?</li> <li>a health professional who is not a physician (eg, nurse) who is qualified to help you?</li> </ul>	857 (88.2) 519 (55.2)	35 (3.6) 188 (20.0)	80 (8.2) 234 (24.9)

FMC-family medicine centre.

**Table 8. Significant predictors of access:** There were no significant predictors for first-contact accessibility or the ability to get through to the FHT by telephone.

DOMAIN	SOURCE	RR	95% CI	P VALUE
First-contact utilization	PCAT*			
<ul> <li>Age group: ≥65 y vs &lt;65 y</li> <li>Marital status: married or common law vs single</li> <li>Marital status: separated, divorced, or widowed vs single</li> <li>Employed vs not employed</li> </ul>		1.06 1.04 1.06 1.04	1.01-1.12 1.01-1.08 1.01-1.10 1.01-1.07	.01 .02 .015 .034
Satisfaction	PCAS <sup>+</sup>			
Usual wait for appointment when sick				
<ul> <li>FHT with nurse practitioner vs no nurse practitioner</li> <li>≥ 10 physicians vs &lt; 10 physicians</li> <li>Age group: 40-64 y vs &lt; 40 y and ≥ 65 y</li> <li>Age group: ≥ 65 y vs &lt; 65 y</li> <li>Marital status: married or common law vs single</li> <li>Marital status: separated, divorced, or widowed vs single</li> <li>Health is excellent, very good, or good vs fair or poor</li> </ul>		1.18 1.32 1.14 1.21 1.21 1.31 1.24	1.01-1.37 1.04-1.68 1.02-1.28 1.02-1.43 1.06-1.39 1.11-1.53 1.07-1.44	.04 .02 .02 .03 .005 .001
Ability to get medical advice by telephone	PCAS <sup>+</sup>			
<ul><li>Health is excellent, very good, or good vs fair or poor</li><li>Employed vs not employed</li></ul>		1.30 0.85	1.05-1.62 0.72-0.99	.02 .04
Willingness to see another physician at the FHT for routine or follow-up visits	Research team <sup>†</sup>			
Marital status: married or common law vs single		1.15	1.02-1.29	.02
Willing to see a health professional (nonphysician) for routine or follow-up visit  • FHT with nurse practitioner vs no nurse practitioner	Research team <sup>†</sup>	1.46	1.14-1.87	.003
Willingness to see another physician at the FHT for urgent or sick visit	Research team <sup>†</sup>			
• Distributed sites vs no distributed sites		0.91	0.82-0.99	.047
Willingness to see a health professional (nonphysician) at the FHT for urgent or sick visit	Research team <sup>†</sup>			
• FHT with nurse practitioner vs no nurse practitioner		1.27	1.02-1.57	.03
Would like to be able to get advice by e-mail	Research team§			
<ul> <li>Age group: ≥65 y vs &lt;65 y</li> <li>Income \$36000-\$75000 vs ≤\$35000 and &gt;\$75000</li> <li>Income &gt; \$75000 vs ≤\$75000</li> <li>More than high school education vs high school education or less</li> </ul>		0.56 1.43 1.85 1.93	0.41-0.77 1.10-1.86 1.42-2.42 1.23-3.02	<.001 .008 <.001 .004

FHT—family health team, PCAS—Primary Care Assessment Survey, PCAT—Primary Care Assessment Tool Adult Expanded Version.

<sup>\*</sup>Significant predictors of score ≥3 on the utilization and access domains.

<sup>&</sup>lt;sup>†</sup>PCAS scoring: excellent, very good, or good vs fair, poor, or very poor.

<sup>\*</sup>Scoring: yes vs no or maybe.

<sup>§</sup>Scoring: yes vs no or not sure.

Satisfaction with access and overall care was high in our study, consistent with typically high satisfaction with health care shown in many survey studies.<sup>8,9,15,17</sup> However, satisfaction with health care does not necessarily mean that the care is of high quality. Satisfaction is determined by many individual characteristics such as expectations, sociodemographic factors, and psychosocial variables<sup>22,23</sup> and might reflect satisfaction with the provider.24 Satisfaction has been shown to be higher for patients receiving care from their own family physician or their physician's after-hours clinic.<sup>25</sup> It is important to keep this in mind, as patient satisfaction is increasingly being adopted as an indicator of health care quality.

The findings of this study can serve as baseline descriptors against which interventions to improve access can be measured. Findings about these access measures, comparing each aFHT to the overall scores, were presented to each team. The goal is to survey these practices again in the future to reevaluate performance and any strategies implemented. For example, feedback and practice-based improvement plans have been shown to improve accessibility and availability.26 The adoption of open-access scheduling is increasingly being proposed as an organizational change to improve access, with some academic family practices reporting improvement in access.27,28

#### Limitations

This study reflects the views of patients who were attending the clinic so might be biased in that these individuals have been successful in accessing care. The response rate was reasonable for a survey, but those who chose to respond could be biased in either direction. The survey was long, which might have contributed to the lower response rate. The results reflect patients' views on access in aFHTs in a large Canadian urban and suburban centre and might not be generalizable to rural practices. Very few studies on access have involved academic centres; more research is needed in this area to add to the findings of this study.

#### Conclusion

This baseline study of access to PC in the early development of aFHTs shows that although patients are generally satisfied with their care, there is room for improvement in access. Strategies to improve information about how to access care, the role and scope of nonphysician health professional team members, and organizational change should be considered. The performance of these academic teams will affect new family physicians and nonphysician health professionals training in these practices. How these trainees deal with the challenges of access in their future practices will be shaped by how their current practice teams respond to patients' perceptions of access in PC.

Dr Carroll is a family physician with the Mount Sinai Academic Family Health Team and Professor in the Department of Family and Community Medicine at the University of Toronto in Ontario. Dr Talbot is a family physician with the Mount Sinai Academic Family Health Team and Professor in the Department of Family and Community Medicine at the University of Toronto. Ms Permaul is Research Associate in the Ray D. Wolfe Department of Family Medicine at Mount Sinai Hospital. Ms Tobin is a doctoral candidate at the University of Toronto and a fellow at the Wilson Centre in the University Health Network. Dr Moineddin is Associate Professor in the Department of Family and Community Medicine at the University of Toronto, Scientist at the Institute for Clinical Evaluative Sciences, and Associate Professor at the Dalla Lana School of Public Health at the University of Toronto. Dr Blaine is a family physician with the STAR Family Health Team, Assistant Professor in the Department of Family and Community Medicine at the University of Toronto, and President of the Association of Family Health Teams of Ontario. **Dr Bloom** is a family physician with the University Health Network and Assistant Professor in the Department of Family and Community Medicine at the University of Toronto. Dr Butt is a family physician at the Scarborough Hospital and Assistant Professor in the Department of Family and Community Medicine at the University of Toronto, Ms Kay is Regional Manager for the Geriatric Assessment and Intervention Network at Lakeridge Health in Oshawa, Ont. **Dr Telner** is a family physician with the South East Toronto Family Health Team and Assistant Professor in the Department of Family and Community Medicine at the University of Toronto.

#### Acknowledgment

Funding was provided by the Department of Family and Community Medicine at the University of Toronto and at Mount Sinai Hospital in Toronto, Ont. We thank Chris Meaney for his help with analysis, the clinic secretaries at the family health teams (FHTs) who assisted with data collection, and the many FHT patients who shared their time and perspectives on academic FHTs.

Drs Carroll and Talbot, Ms Permaul, Ms Tobin, Drs Blaine and Butt, Ms Kay, and Dr Telner contributed to the design of the study. Dr Carroll, Ms Permaul, Ms Tobin, and Dr Moineddin contributed to analysis. All authors contributed to writing and editing the manuscripts and approved the final version submitted.

#### Competing interests

None declared

#### Correspondence

Dr June C. Carroll; e-mail jcarroll@mtsinai.on.ca

#### References

- 1. Kringos DS, Boerma WG, Hutchinson A, van der Zee J, Groenewegen PP. The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Serv Res 2010;10:65.
- 2. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Q 2005;83(3):457-502.
- 3. Starfield B. Primary care: an increasingly important contributor to effectiveness, equity, and efficiency of health services. SESPAS report 2012. Gac Sanit 2012;26(Suppl 1):20-6. Epub 2012 Jan 21.
- 4. Haggerty J, Burge F, Lévesque JF, Gass D, Pineault R, Beaulieu MD, et al. Operational definitions of attributes of primary health care: consensus among Canadian experts. Ann Fam Med 2007;5(4):336-44.
- 5. Haggerty JL, Pineault R, Beaulieu MD, Brunelle Y, Gauthier J, Goulet F, et al. Practice features associated with patient-reported accessibility, continuity, and coordination of primary health care. Ann Fam Med 2008;6(2):116-23.
- 6. Glazier RH. Primary care reform. CMAJ 2009;181(1-2):61
- 7. Tourigny A, Aubin M, Haggerty J, Bonin L, Morin D, Reinharz D, et al. Patients' perceptions of the quality of care after primary care reform. Family medicine groups in Quebec. Can Fam Physician 2010;56:e273-82. Available from: www.cfp.ca/content/56/7/e273.full.pdf+html. Accessed 2015 Dec 2.
- 8. Howard M, Agarwal G, Hilts L. Patient satisfaction with access in two interprofessional academic family medicine clinics. Fam Pract 2009;26(5):407-12. Epub
- 9. Muggah E, Hogg W, Dahrouge S, Russell G, Kristjansson E, Muldoon L, et al. Patient-reported access to primary care in Ontario. Effect of organizational characteristics. Can Fam Physician 2014;60(1):e24-31. Available from: www. cfp.ca/content/60/1/e24.full.pdf+html. Accessed 2015 Dec 2.
- 10. Shi L, Starfield B, Xu J. Validating the Adult Primary Care Assessment Tool. J Fam Pract 2001;50(2):161.
- 11. Safran DG, Kosinski M, Tarlov AR, Rogers WH, Taira DH, Lieberman N, et al. The Primary Care Assessment Survey: tests of data quality and measurement performance. Med Care 1998;36(5):728-39.
- 12. Lévesque JF, Haggerty J, Beninguisse G, Burge F, Gass D, Beaulieu MD, et al. Mapping the coverage of attributes in validated instruments that evaluate primary healthcare from the patient perspective. BMC Fam Pract 2012;13:20.
- 13. Carroll J, Talbot Y, Permaul J, Tobin A, Moineddin R, Blaine S, et al. Academic family health teams. Part 1: patient perceptions of core primary care domains. Can Fam Physician 2016;62:e23-30.
- 14. Schoen C, Osborn R, Squires D, Doty M, Rasmussen P, Pierson R, et al. A survey of primary care doctors in ten countries shows progress in use of health information technology, less in other areas. Health Aff (Millwood) 2012;31(12):2805-16. Epub 2012 Nov 15.

- 15. Canadian Institute for Health Information. Experiences with primary health care in Canada. Ottawa, ON: Canadian Institute for Health Information; 2009.
- 16. Kontopantelis E, Roland M, Reeves D. Patient experience of access to primary care: identification of predictors in a national patient survey. BMC Fam Pract 2010;11:61.
- 17. Wetmore S, Boisvert L, Graham E, Hall S, Hartley T, Wright L, et al. Patient satisfaction with access and continuity of care in a multidisciplinary academic family medicine clinic. Can Fam Physician 2014;60:e230-6. Available from: www.cfp.ca/content/60/4/e230.full.pdf+html. Accessed 2015 Dec 2.
- 18. Fashner J, Drye ST. Internet availability and interest in patients at a family medicine residency clinic. Fam Med 2011;43(2):117-20.
- 19. Singh H, Fox S, Petersen N, Shethis A, Street R. Older patients' enthusiasm to use electronic mail to communicate to their physicians: cross-sectional survey. J Med Internet Res 2009;11(2):e18.
- 20. Virij A, Yarnall K, Krause K, Pollak K, Scannell M, Gadison M. Use of email in a family practice setting; opportunities and challenges in patient-andphysician-initiated communication. BMC Med 2006;4:18.

- 21. Ye J, Rust G, Fry-Johnson Y, Strothers H. E-mail in patient-provider communication: a systematic review. Patient Educ Couns 2010;80(2):266-73. Epub 2009 Nov 13.
- 22. Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. Soc Sci Med 1997;45(12):1829-43.
- 23. Kupfer JM, Bond EU. Patient satisfaction and patient-centered care: necessary but not equal. JAMA 2012;308(2):139-40.
- 24. Williams B. Patient satisfaction: a valid concept? Soc Sci Med 1994;38(4):509-16.
- 25. Howard M, Goertzen J, Hutchison B, Kaczorowski J, Morris K. Patient satisfaction with care for urgent health problems: a survey of family practice patients. Ann Fam Med 2007;5(5):419-24.
- 26. Kirschner K, Braspenning J, Maassen I, Bonte A, Burgers J, Grol R. Improving access to primary care: the impact of a quality-improvement strategy. Qual Saf Health Care 2010;19(3):248-51. Epub 2010 Apr 27.
- 27. Cameron S, Sadler L, Lawson B. Adoption of open-access scheduling in an academic family practice. Can Fam Physician 2010;56:906-11.
- 28. Steinbauer JR, Korell K, Erdin J, Spann SJ. Implementing open-access scheduling in an academic practice. Fam Pract Manag 2006;13(3):59-64.

-\*\*\*-